

CITY OF FAIRFIELD (PWS 5130001)
SOURCE WATER ASSESSMENT FINAL REPORT

July 26, 2001



State of Idaho
Department of Environmental Quality

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Executive Summary

Under the Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the Act. This assessment is based on a land use inventory of the designated assessment area and sensitivity factors associated with the wells and aquifer characteristics.

This report, *Source Water Assessment for the City of Fairfield, Idaho*, describes the public drinking water system, the boundaries of the zones of water contribution, and the associated potential contaminant sources located within these boundaries. This assessment should be used as a planning tool, taken into account with local knowledge and concerns, to develop and implement appropriate protection measures for this source. **The results should not be used as an absolute measure of risk and they should not be used to undermine public confidence in the water system.**

The City of Fairfield (PWS 5130001) drinking water system consists of three potential ground water sources: Well #1, Well #2, and Well #3. Well #2 is currently inoperable and the city has no plans to bring it back online. Well #1 is the primary source of drinking water for the system Well #3 is used only as a backup well. A check of the Idaho Drinking Water Information Management System (DWIMS) revealed past drinking water quality information for the two operable wells. From April 1995 to June 1996 total coliform bacteria were detected three times at three different points in the distribution system.

In December 1994, chromium was detected in Well #1 at a concentration of 0.0023 milligrams per liter (mg/l). The Maximum Contaminant Level (MCL) for chromium is 0.1 mg/l. This chromium detection, far below the MCL, was not confirmed by a repeat sample and chromium has not been detected in Well #1 since 1994. From August 1991 to September 2000, nitrate levels in Well #1 ranged from 0.09 mg/l to 0.41 mg/l. The highest concentration of nitrates detected in Well #1 is just over 4% of the MCL for nitrate, 10 mg/l. Nitrate in Well #1 is likely to be naturally occurring in the formations in which the well was developed. No volatile organic compounds (VOCs), synthetic organic compounds (SOCs), or microbial contaminant detections were recorded for Well #1.

A Sanitary Survey conducted in 1999 recommended that the City of Fairfield screen and turn down the vent tube for Well #1 in order to meet current State Requirements. In terms of total susceptibility, Well #1 rated moderate for IOCs, VOCs, SOCs, and microbial contaminants. The well-drained nature of the soils, the composition of the vadose zone (zone from land surface to the water table), shallow depth to water, and the presence of potential sources of contamination in the delineated source water assessment area contributed to the overall ratings for Well #1.

From February 1997 to September 2000, nitrate levels in Well #3 ranged from 0.21 mg/l to 0.37 mg/l. The highest concentration of nitrates detected in Well #3 is under 4% of the MCL for nitrate. Nitrate in Well #3 is likely to be naturally occurring in the formations in which the well was developed. No VOCs, SOCs, or microbial contaminant detections were recorded for Well #3.

A Sanitary Survey conducted in 1999 recommended that the City of Fairfield install a properly screened and down-turned vent tube for Well #3 in order to meet current State Requirements. In terms of total susceptibility, Well #3 rated moderate for IOCs, VOCs, SOCs, and microbial contaminants. The well-drained nature of the soils, the composition of the vadose zone (zone from land surface to the water table), and the shallow depth to water contributed to the overall ratings for Well #1.

This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a “pristine” area or an area with numerous industrial and/or agricultural land uses that require education and surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

For the City of Fairfield, source water protection activities should first focus on correcting, if corrections have not been completed, the deficiencies outlined in the Sanitary Survey. Any spills from the identified potential contaminant sources in the source water assessment area for Well #1 should be monitored carefully. Most of the source water protection designated area for Well #1 is outside the direct jurisdiction of the City of Fairfield. Most of the source water protection designated area for Well #3 is within the direct jurisdiction of the City of Fairfield. Partnerships with state and local agencies and industry groups should be established and are critical to success. Due to the time involved with the movement of ground water, source water protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term. Source water protection activities for agriculture should be coordinated with the Idaho State Department of Agriculture, the Soil Conservation Commission, the local Soil and Water Conservation District, and the Natural Resources Conservation Service.

SOURCE WATER ASSESSMENT FOR CITY OF FAIRFIELD, CAMAS COUNTY, IDAHO

Section 1. Introduction - Basis for Assessment

The following sections contain information necessary to understand how and why this assessment was conducted. **It is important to review this information to understand what the ranking of this source means.** A map showing the delineated source water assessment area and the inventory of significant potential sources of contamination identified within that area are attached. The list of significant potential contaminant source categories and their rankings used to develop the assessment also is attached.

Background

Under the Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency (EPA) to assess every source of public drinking water for its relative susceptibility to contaminants regulated by the Safe Drinking Water Act. This assessment is based on a land use inventory of the delineated assessment area and sensitivity factors associated with the wells and aquifer characteristics.

Level of Accuracy and Purpose of the Assessment

Since there are over 2,900 public water sources in Idaho, there is limited time and resources to accomplish the assessments. All assessments must be completed by May of 2003. An in-depth, site-specific investigation of each significant potential source of contamination is not possible. **Therefore, this assessment should be used as a planning tool, taken into account with local knowledge and concerns, to develop and implement appropriate protection measures for this source. The results should not be used as an absolute measure of risk and they should not be used to undermine public confidence in the water system.**

The ultimate goal of the assessment is to provide data to local communities to develop a protection strategy for their drinking water supply system. The Idaho Department of Environmental Quality (DEQ) recognizes that pollution prevention activities generally require less time and money to implement than treatment of a public water supply system once it has been contaminated. DEQ encourages communities to balance resource protection with economic growth and development. The decision as to the amount and types of information necessary to develop a source water protection program should be determined by the local community based on its own needs and limitations. Wellhead or source water protection is one facet of a comprehensive growth plan, and it can complement ongoing local planning efforts.

Section 2. Conducting the Assessment

General Description of the Source Water Quality

The City of Fairfield wells are community wells that serve approximately 400 people and approximately 255 connections. The wells are located in the southern portion of Fairfield, west of Soldier Creek, in Camas County, (Figure 1). The public drinking water system for the City of Fairfield is currently comprised of two groundwater wells: Well #1 and Well #3.

Very slight nitrate detections represent the only significant water chemistry recorded for the public water system. The IOC nitrate was detected in both wells in the past, far below the MCL of 10 mg/l. Nitrate is likely to be naturally occurring in the formations in which the wells were developed. No VOCs, SOCs, or microbial contaminants were recorded in the source water of any of the wells.

Defining the Zones of Contribution – Delineation

The delineation process establishes the physical area around a well that will become the focal point of the assessment. The process includes mapping the boundaries of the zone of contribution into time-of-travel (TOT) zones (zones indicating the number of years necessary for a particle of water to reach a well) for water in the aquifer. Washington Group, International used a refined computer model approved by the EPA in determining the 3-year (Zone 1B), 6-year (Zone 2), and 10-year (Zone 3) TOT for water associated with the Camas Prairie hydrologic province in the vicinity of the City of Fairfield. The computer model used site specific data, assimilated by Washington Group, International from a variety of sources including City of Fairfield well logs, other local area well logs, and hydrogeologic reports summarized below.

Both operative wells are completed within a confined valley-fill aquifer. One of these wells, currently designated Well #1, is also partially screened in an upper unconfined aquifer. This well is approximately 425 feet in depth and has 16-inch-diameter, 80-slot well screen. Due to a broken pump, Well #2 is no longer in operation, and there are no plans to fix or replace the pump. Well #3 is used only as a backup well but is “exercised” monthly. This well is 760 feet in depth and has 10-inch-diameter casing. The casing is perforated every 2 feet between 596 to 750 feet below ground surface.

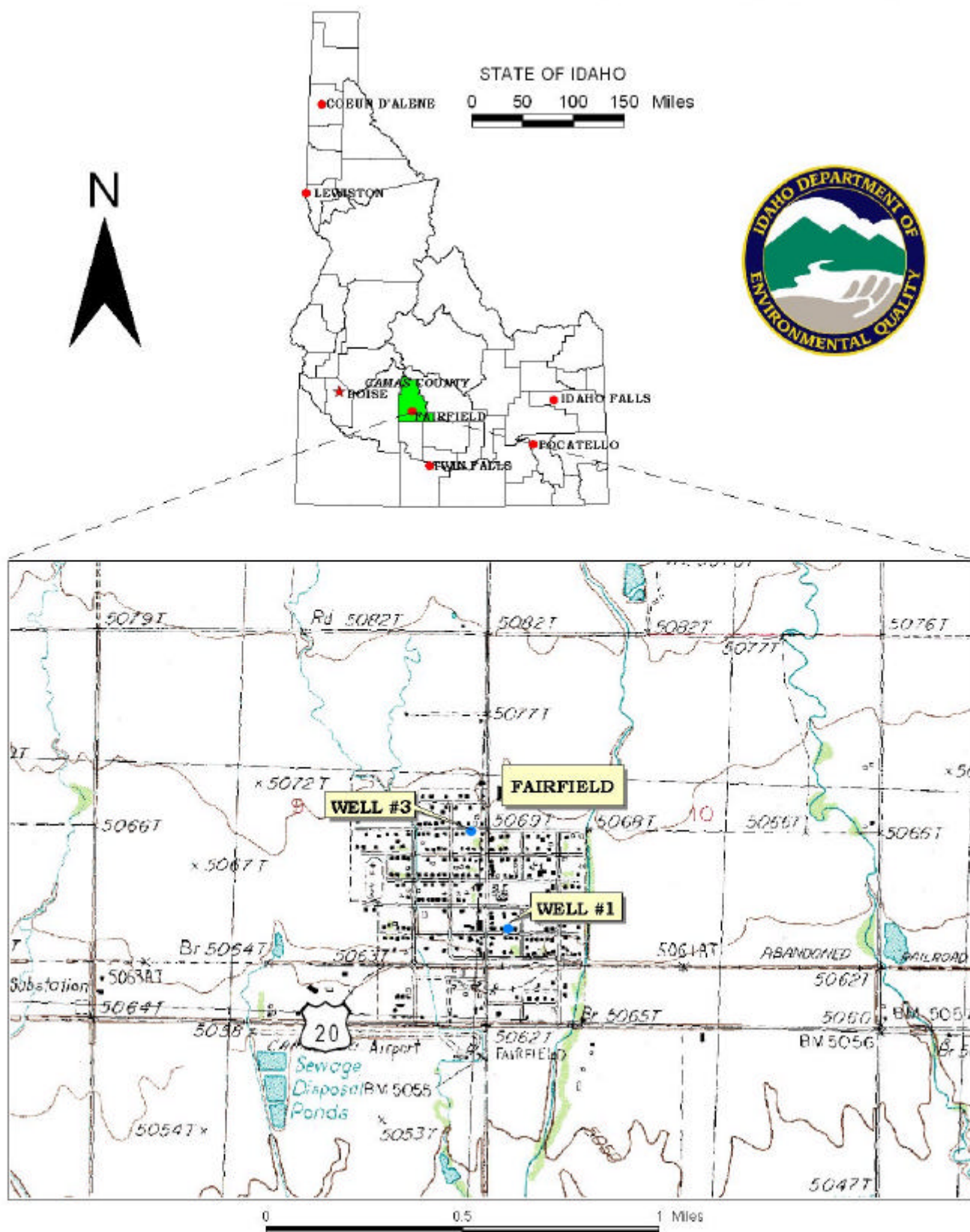
The Camas Prairie basin occupies approximately 730 square miles within the Big Wood Ground Water Management Area in south-central Idaho (Harrington and Bendixsen, 1999). The basin is an eastward-trending intermontane trough with an average elevation of 5,000 feet above mean sea level (msl) (Wallace, 1972 and Young, 1978). Mountains made up of Cretaceous granite (e.g., Idaho batholith) bound the basin on the north. To the east and west are basalts of the Bruneau Formation. A ridge of Tertiary volcanic tuffs and flows form the southern boundary. The basin is filled with poorly sorted unconsolidated clay, silt, sand, and gravel originating from alluvial and lake deposits. Granite forms the basement rock (Harrington and Bendixsen, 1999; Wallace, 1972; Walton, 1961; and Young, 1978).

Valley-fill sediments form the basin’s major aquifer. The sediments are estimated to be 300 to 550 feet in depth (Wallace, 1972 and Young, 1978). Based on interpretation of well logs, Wallace (1972, p. 20) reports the existence of a 90-foot-thick clay layer located approximately 120 to 210 feet below ground surface. This clay forms a confining layer that separates the valley-fill into an upper unconfined and a lower artesian aquifer. Both valley-fill aquifers are interspersed with discontinuous clay, sand, and gravel lenses. Young (1978, p. 17) and Briar et al. (1996) show the general ground-water flow direction in both aquifers to be to the southeast toward Camas Creek. The City of Fairfield’s municipal wells are located within a discharge area of the lower aquifer (Young, 1978, p. 13).

The delineated source water assessment area for Well #1 can best be described as a pie shaped corridor approximately 0.2 miles wide at the wellhead and 0.5 miles wide at the furthest extent of the delineation,

approximately 0.9 miles to the north of the wellhead (Figure 2). The delineated source water assessment area for Well #3 can best be described as three concentric oblate circles around the wellhead, approximately 0.2 miles wide and 0.3 miles long, extending in all directions from the wellhead, predominantly northwest. The actual data used by Washington Group, International in determining the source water assessment delineation areas are available upon request.

FIGURE 1. Geographic Location of the City of Fairfield



Identifying Potential Sources of Contamination

A potential source of contamination is defined as any facility or activity that stores, uses, or produces, as a product or by-product, the contaminants regulated under the Safe Drinking Water Act and has a sufficient likelihood of releasing such contaminants at levels that could pose a concern relative to drinking water sources. The goal of the inventory process is to locate and describe those facilities, land uses, and environmental conditions that are potential sources of ground water contamination. The locations of potential sources of contamination within the delineation areas were obtained by field surveys conducted by DEQ and from available databases.

The dominant land use outside the City of Fairfield area is agricultural. Land use within the immediate area of the wellheads consists of residential and commercial property.

It is important to understand that a release may never occur from a potential source of contamination provided they are using best management practices. Many potential sources of contamination are regulated at the federal level, state level, or both to reduce the risk of release. Therefore, when a business, facility, or property is identified as a potential contaminant source, this should not be interpreted to mean that this business, facility, or property is in violation of any local, state, or federal environmental law or regulation. What it does mean is that the potential for contamination exists due to the nature of the business, industry, or operation. There are a number of methods that water systems can use to work cooperatively with potential sources of contamination. These involve educational visits and inspections of stored materials. Many owners of such facilities may not even be aware that they are located near a public water supply well.

Contaminant Source Inventory Process

A contaminant inventory of the study area was conducted during February 2001. This process involved identifying and documenting potential contaminant sources within the City of Fairfield Source Water Assessment area through the use of computer databases and Geographic Information System (GIS) maps developed by DEQ. The delineated source water area for Well #1 contains four potential contaminant sources, all of them in the 6 to 10-year time of travel (Table 1). Figure 2 shows the locations of these various potential contaminant sites relative to the wellheads. There are no identified potential sources of contamination for Well #3 (Figure 3).

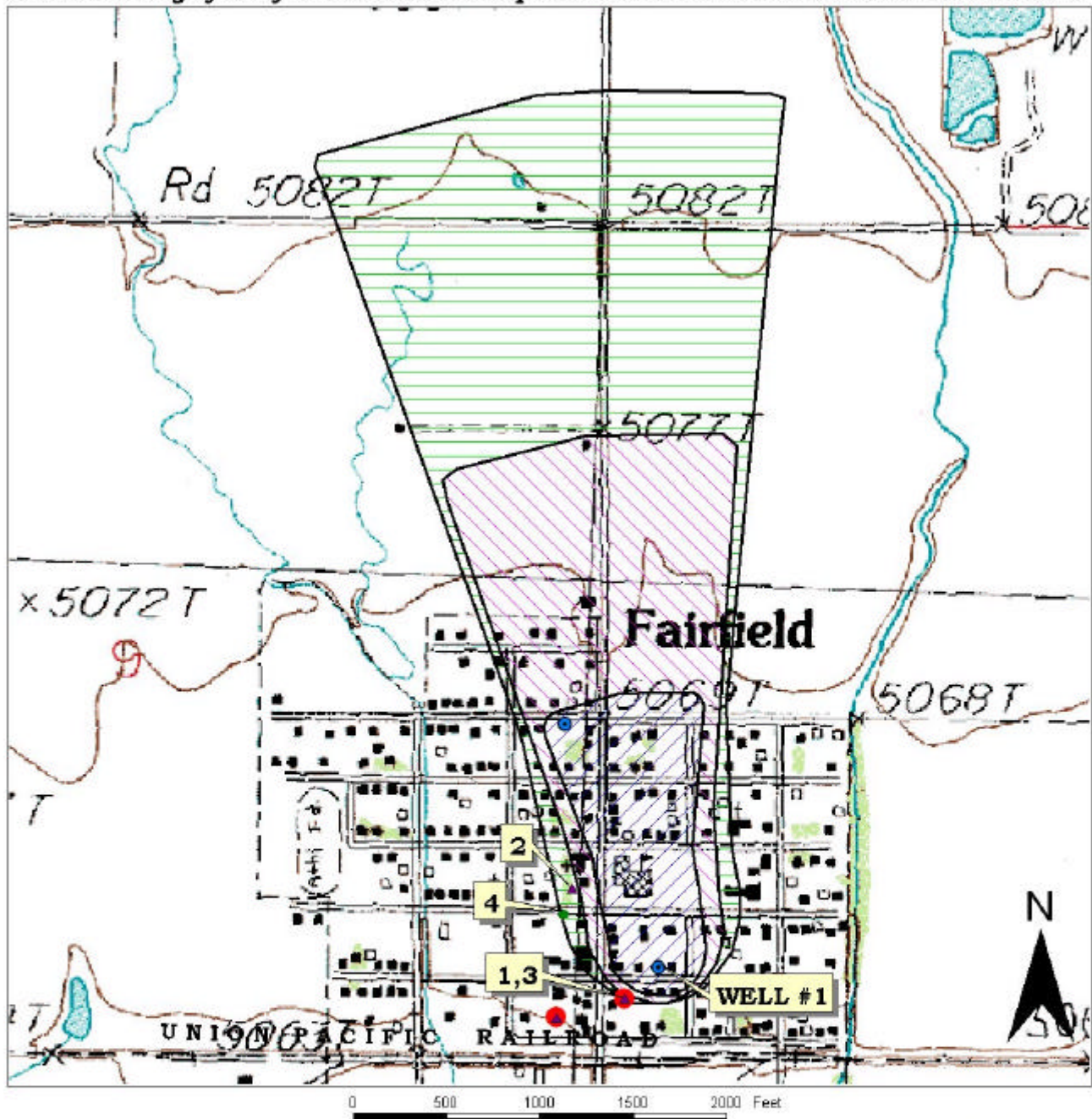
Table 1. City of Fairfield Well #1, Potential Contaminant Inventory

Site #	Source Description	TOT Zone ¹ (years)	Source of Information	Potential Contaminants ²
1	LUST - Site Cleanup Completed, impact unknown	6-10	Database Search	IOC, VOC, SOC
2	Ranger District, closed	6-10	Database Search	IOC, VOC, SOC
3	UST - Ice Cream Vendor	6-10	Database Search	IOC, Microbes
4	Citizens Communication	6-10	Database Search	IOC, VOC, SOC

¹ TOT = time-of-travel (in years) for a potential contaminant to reach the wellhead

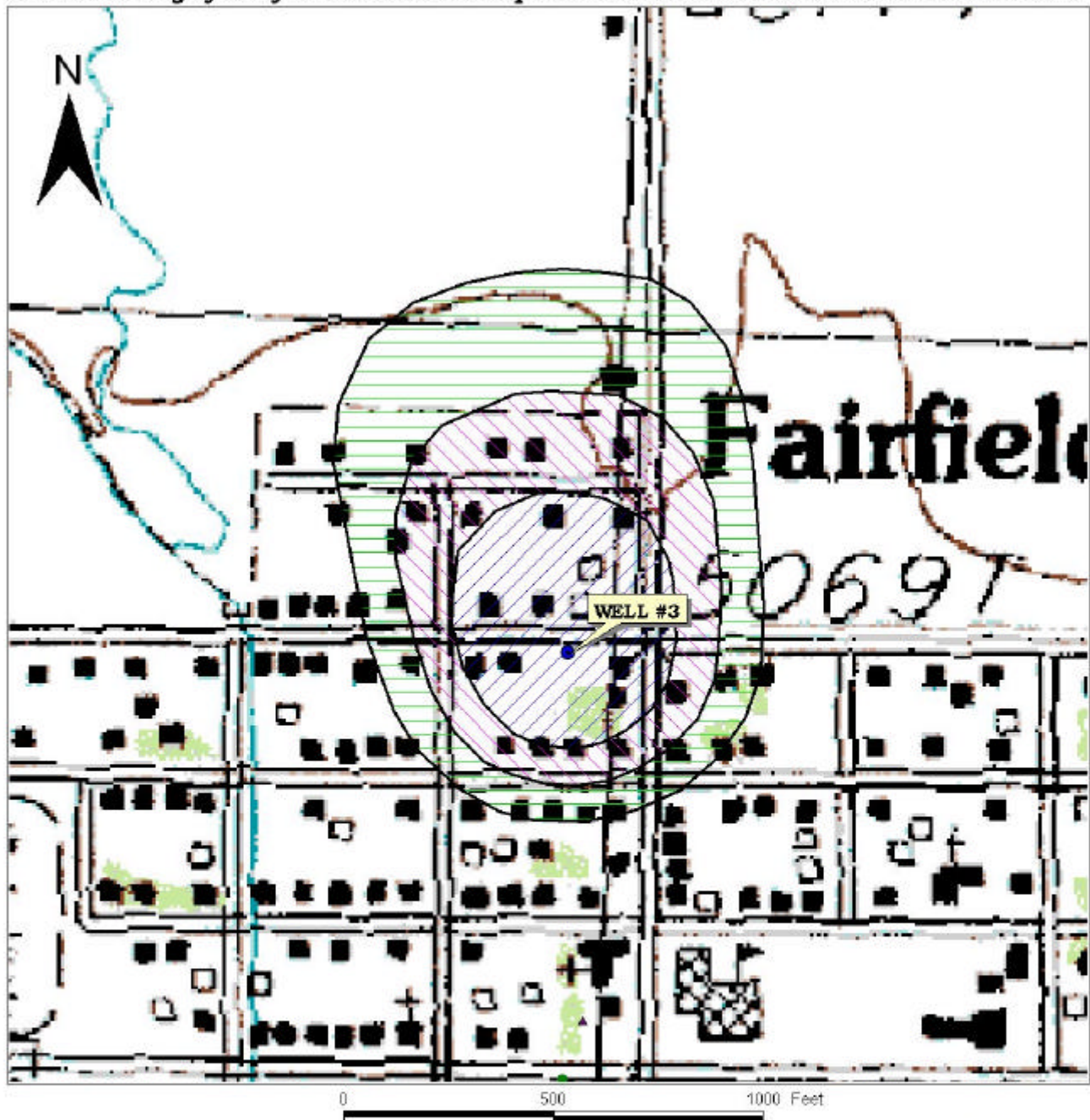
² IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

FIGURE 2. City of Fairfield Delineation Map and Potential Contaminant Source Locations



PWS# 5130001
WELL #1

FIGURE 3. City of Fairfield Delineation Map and Potential Contaminant Source Locations



PWS# 5130001
WELL #3

Section 3. Susceptibility Analyses

The water system's susceptibility to contamination was ranked as high, moderate, or low risk according to the following considerations: hydrologic characteristics, physical integrity of the well, land use characteristics, and potentially significant contaminant sources. The susceptibility rankings are specific to a particular potential contaminant or category of contaminants. Therefore, a high susceptibility rating relative to one potential contaminant does not mean that the water system is at the same risk for all other potential contaminants. The relative ranking that is derived for each well is a qualitative, screening-level step that, in many cases, uses generalized assumptions and best professional judgement. The following summaries describe the rationale for the susceptibility ranking.

Hydrologic Sensitivity

Hydrologic sensitivity was moderate for both wells (Table 2). This reflects the nature of the soils being in the moderately-drained to well-drained class and the shallow depth to water which makes the well water susceptible to downward migrating contaminants. The vadose zone (zone from land surface to the water table) contains more than 50 feet of clay layers that could retard downward movement of contaminants.

Well Construction

Well construction directly affects the ability of the well to protect the aquifer from contaminants. The City of Fairfield drinking water system consists of two wells that extract ground water for residential and commercial uses. The well system construction scores were moderate for both wells (Table 2). A sanitary survey for the system was completed in 1999 to determine if the wells were in compliance with wellhead and surface seal standards. The Sanitary Survey indicates that vents of both wells need to be repaired. Neither of the wells are in the 100-year floodplain.

Well logs were available for both wells. The highest water production zones for Well #1 and #3 are within 100 feet of the static water level, making the source water susceptible to potential contamination from downward migrating contaminants. Greater distance between the static water level and the major production zone provides a buffer between potential contaminants and the source water intake, providing greater opportunity for attenuation or adsorption of contaminants. The casing was extended into low permeability units in both wells, protecting the source water from laterally moving contaminants. Though the wells may have been in compliance with standards when they were drilled, current PWS well construction standards are more stringent. The casing thickness for the two wells does not meet IDWR standards of 0.375 inches for 16-inch diameter (Well #1) casing and 0.365 for 10-inch diameter casing (Well #3) as listed in the Recommended Standards for Water Works (1997).

The IDWR Well Construction Standards Rules (1993) require all PWSs to follow DEQ standards as well. IDAPA 58.01.08.550 requires that PWSs follow the Recommended Standards for Water Works (1997) during construction.

Potential Contaminant Sources and Land Use

Both wells rated low for IOCs (e.g., nitrates), VOCs (e.g., petroleum products), SOCs (e.g., pesticides), and microbial contamination (e.g., total coliform). A lack of potential contaminant sources in the 3-year time of travel zone, low countywide agricultural chemical use, and the lack of potential contaminant sources within the wellhead buffer zone contributed to the low rating for the wells. Table 1 lists the potential contaminant sources in the delineated source water area for Well #1. The locations of potential contaminant sources for Well #1 are shown on Figure 2. There are no identified potential contaminant sources for Well #3.

Final Susceptibility Ranking

A detection above a drinking water standard MCL or a detection of a VOC or SOC at the wellhead will automatically give a high susceptibility rating to a well despite the land use of the area because a pathway for contamination already exists. Having multiple potential contaminant sources in the 0 to 3-year time of travel zone (Zone 1B) and a large percentage of agricultural land contribute greatly to the overall ranking. Hydrologic sensitivity and system construction scores are heavily weighted in the final scores.

In terms of total susceptibility, both wells rated on the low side of moderate for IOC, VOC, SOC, and microbial contamination (Table 2). The moderate rating reflects the moderate scores for system construction and hydrologic sensitivity, as well as low number of potential contaminant sources in the delineated source water assessment areas for both wells.

Table 2. Summary of the City of Fairfield Susceptibility Evaluation

Well	Susceptibility Scores ¹									
	Hydrologic Sensitivity	Contaminant Inventory				System Construction	Final Susceptibility Ranking			
		IOC	VOC	SOC	Microbials		IOC	VOC	SOC	Microbials
Well #1	M	L	L	L	L	M	M	M	M	M
Well #3	M	L	L	L	L	M	M	M	M	M

¹H = High Susceptibility, M = Moderate Susceptibility, L = Low Susceptibility,
IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

Susceptibility Summary

Very slight nitrate detections represent the only significant water chemistry recorded for the public water system. The IOC nitrate was detected in both wells far below the MCL of 10 mg/l for nitrate. Nitrate is likely to be naturally occurring in the formations in which the wells were developed. No VOCs, SOC, or microbial contaminants were recorded in the source water of either well. Well #1 has four potential contaminant sources in the 6 to 10-year time of travel zone and Well #3 has no identified potential contaminant sources.

Section 4. Options for Source Water Protection

The susceptibility assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what the susceptibility ranking a source receives, protection is always important. Whether the source is currently located in a “pristine” area or an area with numerous industrial and/or agricultural land uses that require education and surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

An effective source water protection program is tailored to the particular local source water protection area. A community with a fully developed source water protection program will incorporate many strategies. For the City of Fairfield, source water protection activities should focus on implementation of practices aimed at protecting the area nearest the wells and addressing any deficiencies listed in the 2000 Sanitary Survey. The City of Fairfield should also be diligent about local businesses with potential IOC, VOC, SOC, or microbial contaminants. Any spills from the multiple potential contaminant sources in the delineated capture zones should be monitored carefully. Any surface releases should be monitored to prevent contaminants from infiltrating to the ground water producing zones.

Some of the source water protection designated areas are outside the direct jurisdiction of the City of Fairfield. Partnerships with state and local agencies and industry groups should be established and are critical to success. Continued vigilance in keeping the wells protected from surface flooding can also keep the potential for contamination reduced. Due to the time involved with the movement of ground water, wellhead protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term. Source water protection activities for agriculture should be coordinated with the Idaho State Department of Agriculture, the Soil Conservation Commission, the local Soil and Water Conservation District, and the Natural Resources Conservation Service.

Assistance

Public water supplies and others may call the following DEQ offices with questions about this assessment and to request assistance with developing and implementing a local protection plan. In addition, draft protection plans may be submitted to the DEQ office for preliminary review and comments.

Twin Falls Regional DEQ Office (208) 736-2190

State DEQ Office (208) 373-0502

Website: <http://www2.state.id.us/deq>

Water suppliers serving fewer than 10,000 persons may contact John Bokor, Idaho Rural Water Association, at 1-800-962-3257 for assistance with wellhead protection strategies.

POTENTIAL CONTAMINANT INVENTORY LIST OF ACRONYMS AND DEFINITIONS

AST (Aboveground Storage Tanks) – Sites with aboveground storage tanks.

Business Mailing List – This list contains potential contaminant sites identified through a yellow pages database search of standard industry codes (SIC).

CERCLIS – This includes sites considered for listing under the **Comprehensive Environmental Response Compensation and Liability Act (CERCLA)**. CERCLA, more commonly known as “Superfund” is designed to clean up hazardous waste sites that are on the national priority list (NPL).

Cyanide Site – DEQ permitted and known historical sites/facilities using cyanide.

Dairy – Sites included in the primary contaminant source inventory represent those facilities regulated by Idaho State Department of Agriculture (ISDA) and may range from a few head to several thousand head of milking cows.

Deep Injection Well – Injection wells regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage.

Enhanced Inventory – Enhanced inventory locations are potential contaminant source sites added by the water system. These can include new sites not captured during the primary contaminant inventory, or corrected locations for sites not properly located during the primary contaminant inventory. Enhanced inventory sites can also include miscellaneous sites added by the Idaho Department of Environmental Quality (DEQ) during the primary contaminant inventory.

Floodplain – This is a coverage of the 100-year floodplains.

Group 1 Sites – These are sites that show elevated levels of contaminants and are not within the priority one areas.

Inorganic Priority Area – Priority one areas where greater than 25% of the wells/springs show constituents higher than primary standards or other health standards.

Landfill – Areas of open and closed municipal and non-municipal landfills.

LUST (Leaking Underground Storage Tank) – Potential contaminant source sites associated with leaking underground storage tanks as regulated under RCRA.

Mines and Quarries – Mines and quarries permitted through the Idaho Department of Lands.)

Nitrate Priority Area – Area where greater than 25% of wells/springs show nitrate values above 5mg/l.

NPDES (National Pollutant Discharge Elimination System) – Sites with NPDES permits. The Clean Water Act requires that any discharge of a pollutant to waters of the United States from a point source must be authorized by an NPDES permit.

Organic Priority Areas – These are any areas where greater than 25 % of wells/springs show levels greater than 1% of the primary standard or other health standards.

Recharge Point – This includes active, proposed, and possible recharge sites on the Snake River Plain.

RICRIS – Site regulated under **Resource Conservation Recovery Act (RCRA)**. RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes.

SARA Tier II (Superfund Amendments and Reauthorization Act Tier II Facilities) – These sites store certain types and amounts of hazardous materials and must be identified under the Community Right to Know Act.

Toxic Release Inventory (TRI) – The toxic release inventory list was developed as part of the Emergency Planning and Community Right to Know (Community Right to Know) Act passed in 1986. The Community Right to Know Act requires the reporting of any release of a chemical found on the TRI list.

UST (Underground Storage Tank) – Potential contaminant source sites associated with underground storage tanks regulated as regulated under RCRA.

Wastewater Land Applications Sites – These are areas where the land application of municipal or industrial wastewater is permitted by DEQ.

Wellheads – These are drinking water well locations regulated under the Safe Drinking Water Act. They are not treated as potential contaminant sources.

NOTE: Many of the potential contaminant sources were located using a geocoding program where mailing addresses are used to locate a facility. Field verification of potential contaminant sources is an important element of an enhanced inventory.

Where possible, a list of potential contaminant sites unable to be located with geocoding will be provided to water systems to determine if the potential contaminant sources are located within the source water assessment area.

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Attachment A

City of Fairfield Susceptibility Analysis Worksheet

The final scores for the susceptibility analysis were determined using the following formulas:

- 1) VOC/SOC/IOC Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.2)
- 2) 2) Microbial Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.35)

Final Susceptibility Scoring:

- 0 - 5 Low Susceptibility
- 6 - 12 Moderate Susceptibility
- ≥ 13 High Susceptibility

1. System Construction		SCORE			
Drill Date	3/13/81				
Driller Log Available	YES				
Sanitary Survey (if yes, indicate date of last survey)	YES	1999			
Well meets IDWR construction standards	NO	1			
Wellhead and surface seal maintained	NO	1			
Casing and annular seal extend to low permeability unit	YES	0			
Highest production 100 feet below static water level	NO	1			
Well located outside the 100 year flood plain	YES	0			
Total System Construction Score		3			
2. Hydrologic Sensitivity					
Soils are poorly to moderately drained	NO	2			
Vadose zone composed of gravel, fractured rock or unknown	NO	0			
Depth to first water > 300 feet	NO	1			
Aquitard present with > 50 feet cumulative thickness	YES	0			
Total Hydrologic Score		3			
3. Potential Contaminant / Land Use - ZONE 1A		IOC Score	VOC Score	SOC Score	Microbial Score
Land Use Zone 1A	URBAN/COMMERCIAL	2	2	2	2
Farm chemical use high	NO	0	0	0	
IOC, VOC, SOC, or Microbial sources in Zone 1A	NO	NO	NO	NO	NO
Total Potential Contaminant Source/Land Use Score - Zone 1A		2	2	2	2
Potential Contaminant / Land Use - ZONE 1B					
Contaminant sources present (Number of Sources)	NO	0	0	0	0
(Score = # Sources X 2) 8 Points Maximum		0	0	0	0
Sources of Class II or III leacheable contaminants or	NO	0	0	0	
4 Points Maximum		0	0	0	
Zone 1B contains or intercepts a Group 1 Area	NO	0	0	0	0
Land use Zone 1B	Less Than 25% Agricultural Land	0	0	0	0
Total Potential Contaminant Source / Land Use Score - Zone 1B		0	0	0	0
Potential Contaminant / Land Use - ZONE II					
Contaminant Sources Present	NO	0	0	0	
Sources of Class II or III leacheable contaminants or	YES	1	0	0	
Land Use Zone II	Greater Than 50% Irrigated Agricultural Land	2	2	2	
Potential Contaminant Source / Land Use Score - Zone II		3	2	2	0
Potential Contaminant / Land Use - ZONE III					
Contaminant Source Present	YES	1	1	1	
Sources of Class II or III leacheable contaminants or	YES	1	1	1	
Is there irrigated agricultural lands that occupy > 50% of	YES	1	1	1	
Total Potential Contaminant Source / Land Use Score - Zone III		3	3	3	0
Cumulative Potential Contaminant / Land Use Score		8	7	7	2
4. Final Susceptibility Source Score		8	7	7	7
5. Final Well Ranking		Moderate	Moderate	Moderate	Moderate

1. System Construction		SCORE			
Drill Date	5/1/65				
Driller Log Available	YES				
Sanitary Survey (if yes, indicate date of last survey)	YES	1999			
Well meets IDWR construction standards	NO	1			
Wellhead and surface seal maintained	NO	1			
Casing and annular seal extend to low permeability unit	YES	0			
Highest production 100 feet below static water level	NO	1			
Well located outside the 100 year flood plain	YES	0			
Total System Construction Score		3			
2. Hydrologic Sensitivity					
Soils are poorly to moderately drained	NO	2			
Vadose zone composed of gravel, fractured rock or unknown	NO	0			
Depth to first water > 300 feet	NO	1			
Aquitard present with > 50 feet cumulative thickness	YES	0			
Total Hydrologic Score		3			
3. Potential Contaminant / Land Use - ZONE 1A		IOC Score	VOC Score	SOC Score	Microbial Score
Land Use Zone 1A	URBAN/COMMERCIAL	2	2	2	2
Farm chemical use high	NO	0	0	0	
IOC, VOC, SOC, or Microbial sources in Zone 1A	NO	NO	NO	NO	NO
Total Potential Contaminant Source/Land Use Score - Zone 1A		2	2	2	2
Potential Contaminant / Land Use - ZONE 1B					
Contaminant sources present (Number of Sources)	NO	0	0	0	0
(Score = # Sources X 2) 8 Points Maximum		0	0	0	0
Sources of Class II or III leacheable contaminants or	NO	0	0	0	
4 Points Maximum		0	0	0	
Zone 1B contains or intercepts a Group 1 Area	NO	0	0	0	0
Land use Zone 1B	Less Than 25% Agricultural Land	0	0	0	0
Total Potential Contaminant Source / Land Use Score - Zone 1B		0	0	0	0
Potential Contaminant / Land Use - ZONE II					
Contaminant Sources Present	NO	0	0	0	
Sources of Class II or III leacheable contaminants or	NO	0	0	0	
Land Use Zone II	Less than 25% Agricultural Land	0	0	0	
Potential Contaminant Source / Land Use Score - Zone II		0	0	0	0
Potential Contaminant / Land Use - ZONE III					
Contaminant Source Present	NO	0	0	0	
Sources of Class II or III leacheable contaminants or	YES	1	0	0	
Is there irrigated agricultural lands that occupy > 50% of	YES	1	1	1	
Total Potential Contaminant Source / Land Use Score - Zone III		2	1	1	0
Cumulative Potential Contaminant / Land Use Score		4	3	3	2
4. Final Susceptibility Source Score		7	7	7	7
5. Final Well Ranking		Moderate	Moderate	Moderate	Moderate